IN THE CLAIMS:

Please cancel claims 1 to 5 and 14 to 27 without prejudice and amend the claims as follows:

1. (canceled)

2. (canceled)

3. (canceled)

4. (canceled)

5. (canceled)

6. (currently amended) A method for producing **a** ~~**the**~~ quartz glass article ~~**according to claim 1,**~~ **for producing an optical component,** the method comprising the steps of:

providing a quartz glass cylinder having an inner bore therein,

mechanically treating the inner bore to ~~**the**~~ **a** final dimension; and **then**

applying an etching treatment to the inner bore,

wherein the step of mechanically treating the inner bore comprises a plurality of removal processes each with a successively smaller removal depth **such that,**

~~**wherein**~~ the inner bore has subsurface cracks **therein, and all of the subsurface**

cracks in the inner bore have depths ~~**of a depth**~~ of not more than 2 mm after the last removal process, and

wherein the inner bore is subsequently subjected to the etching treatment so as to produce an etching removal with a depth of not more than 50 μm**, and such that the inner bore has an etched structure that has cracks therein, all of said cracks having a depth of not more than 2.0 mm and a width of not more than 100 μm.**

7. (previously presented) The method according to claim 6, wherein the etching treatment yields an etching removal with a depth of not more than 25 μm.

8. (previously presented) The method according to claim 6, wherein the etching treatment yields an etching removal with a depth of not more than 10 μm.

9. (previously presented) The method according to claim 6, wherein the etching treatment yields an etching removal with a depth of at least 2.5 μm.

10. (previously presented) The method according to claim 6, wherein the etching treatment includes a first etching step in a first etching solution containing hydrofluoric acid, and a second etching step in a second etching solution containing nitric acid.

11. (previously presented) The method according to claim 6, wherein the etching treatment is carried out at a mean etching rate of not more than 3 μm/min.

12. (previously presented) The method according to claim 11, wherein the mean etching rate is not more than 1 μm/min.

13. (previously presented) The method according to claim 11, wherein the mean etching rate is not more than 0.1 μm/min.

14. (canceled)

15. (canceled)

16. (canceled)

17. (canceled)

18. (canceled)

19. (canceled)

20. (canceled)

21. (canceled)

22. (canceled)

23. (canceled)

24. (new) The method according to claim 6, and further comprising

inserting a core rod in the inner bore of the quartz glass cylinder, and

forming a preform from said core rod and said quartz glass cylinder.